



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/681,832 | 10/08/2003 | Ralph A. Graf | LZ-79 | 6604 |
| 7590 10/29/2004 | | | EXAMINER | |
| Friedrich Kueffner Suite 910 317 Madison Avenue New York, NY 10017 | | | WELCH, GARY L | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 3765 | |

DATE MAILED: 10/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/681,832

Applicant(s)

GRAF, RALPH A.

Examiner

Gary L. Welch

Art Unit

3765

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 10, 16, 24 and 25 is/are rejected.
- 7) ☒ Claim(s) 9, 11-15 and 17-23 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 December 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>10082003</u> . | 6) <input type="checkbox"/> Other: _____ |

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the different profile depths (claim 9) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

2. Claims 4 and 12 are objected to because of the following informalities: It appears that the following changes are required:

Claim 4, line 2: change "prifile" to --profile--

Claim 12, line 2: change "0,02" to --0.02--

Appropriate correction is required.

3. Claims 7 and 8 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim.

Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claims 7 and 8 recite identical ranges for the radius of curvature as required in claim 6.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

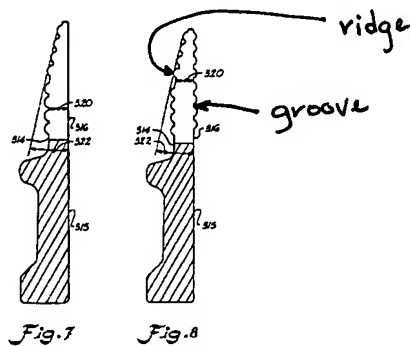
A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-5, 10, 24 and 25 are rejected under 35 U.S.C. 102(b) as being anticipated by Hollingsworth et al. (U.S. 6,185,789).

Hollingsworth et al. a sawtooth wire for producing all-steel sawtooth clothing for a doffer and/or a doffing cylinder of a carding machine, the sawtooth wire comprising a plurality of teeth 315 successively arranged in a longitudinal direction of the wire, each tooth having a tooth breast beginning at a tooth bottom and extending in a direction toward a tooth tip (Figures 7 and 8), and a tooth back that is connected with the tooth breast by two tooth flanks extending parallel to the longitudinal direction of the wire and extends from the tooth tip in a

direction of a tooth bottom of a following tooth, at least one of the tooth flanks having at least one profile segment located between the tooth tip and the tooth bottom and provided with profiling (see figures below).



With regard to claim 2, the profile segment has at least one of at least one profile ridge and at least one profile groove (see figures above).

With regard to claim 3, the profile ridge runs substantially parallel to the longitudinal direction of the wire.

With regard to claim 4, the profile groove runs substantially parallel to the longitudinal direction of the wire.

With regard to claim 5, the profile ridge and the profile groove has an arc-shaped border at least certain sections in a sectional plane that runs perpendicularly longitudinal direction of at least one of the profile ridge and the profile groove.

With regard to claim 10, a flat transition segment is located between at least two adjacent profile ridges or grooves of the profile segment (see figure above).

With regard to claims 24 and 25, the method steps are disclosed in one or more of the above rejections.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 6-8 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hollingsworth et al. (U.S. 6,185,789) in view of Graf (U.S. 6,523,226).

Hollingsworth et al. discloses the invention substantially as claimed above.

However, Hollingsworth et al. does not disclose a sawtooth wire wherein the arc-shaped border section has a radius of curvature in a range of 0.05-0.5 mm, preferably 0.1-0.3 mm, and especially about 0.15 mm in a sectional plane running perpendicularly to the longitudinal direction of the at least one of the profile ridge and the profile groove.

Graf teaches a sawtooth wire for a fiber processing machine wherein the sawtooth wire has an arc-shaped border section has a radius of curvature in a range of 0.05-0.5 mm, preferably 0.1-0.3 mm, and especially about 0.15 mm in a sectional plane running perpendicularly to the longitudinal direction of the at least one of the profile ridge and the profile groove (Col. 2, lines 55-64). These values provide a satisfactory retaining force while simultaneously ensuring a gentle engagement of the fiber.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the ridges and grooves of Hollingsworth et al. with

the dimensions as taught by Graf in order to provide a satisfactory retaining force while simultaneously ensuring a gentle engagement of the fiber.

With regard to claims 7 and 8, the invention is disclosed in the above rejections.

With regard to claim 16, the individual profile grooves and ridges are separated from one another by a distance in the range of 0.1 to 0.6 mm (Col. 4, lines 35-44).

Allowable Subject Matter

8. Claims 9, 11-15 and 17-23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.


Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Hollingsworth '413, Egerer '848, Mladek et al. '714, Wada '152, Atkinson '487 and Graf '012 disclose various sawtooth clothing having profile segments.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gary L. Welch whose telephone number is (703) 305-0451. The examiner can normally be reached on Mon-Fri 5:30-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John J. Calvert can be reached on (703) 305-1025. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Gary L. Welch
Primary Examiner
Art Unit 3765

glw